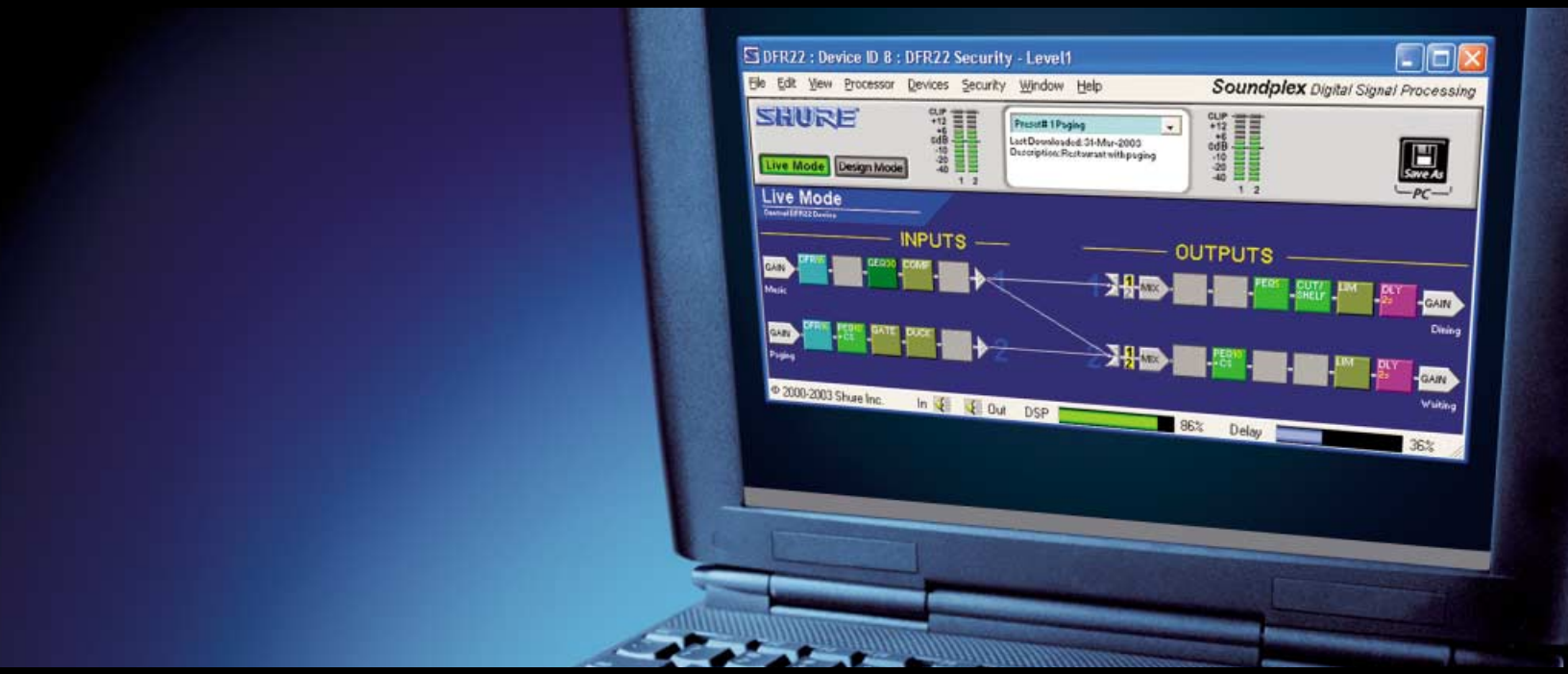
SHURE®

DFR22 Audio Processor *with Feedback Reduction*



Two Channels. *A Powerful Processor.*

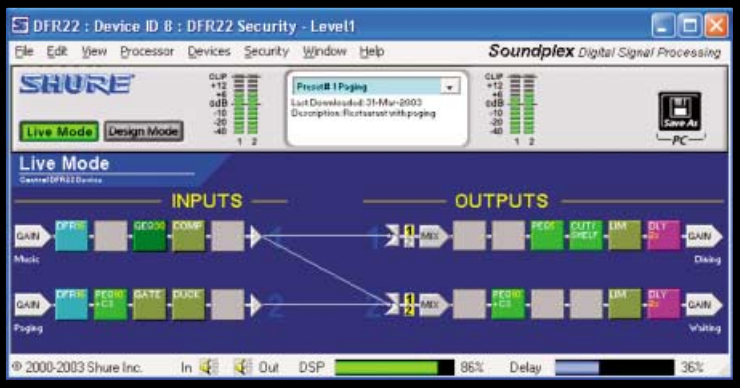
Shure's DFR has quickly become the industry standard for effective feedback reduction. The DFR22 builds on that reputation to provide an affordable full-featured 2x2 audio processor with Shure's drag-and-drop software. It's much more than feedback reduction. For many jobs, it's the only audio processor you'll need.

The Shure DFR Difference.

Featuring enhancements to Shure's patented Adaptive Notch Filter Algorithm, the DFR22 includes single-channel and stereo processing blocks with up to 16 precision notch filters that automatically seek out and reduce feedback. With widths between 1/10 and 1/70 of an octave, these adaptive filters affect only the problem frequencies, maximizing system stability and sound integrity. In addition, **Auto Clear** mode removes dynamic filters and restores the DFR to your ideally-tuned configuration after a specified amount of time.

Full-Featured Processing Power.

The DFR22 has all of the DSP processing you need to ensure the highest quality audio.



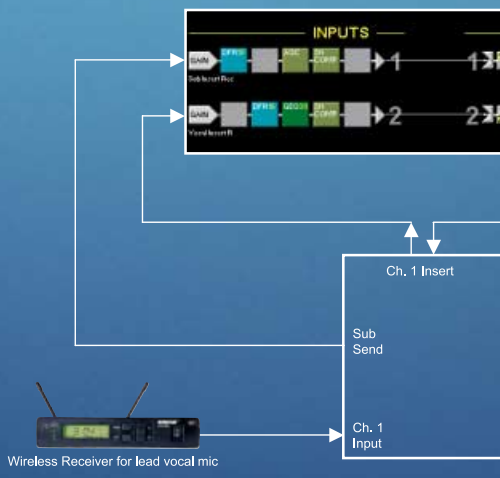
Processors include:

- DFR Automatic Feedback Reducers
- Parametric and Graphic Equalizers
- Cut/Shelf Equalizer
- Compressors/Limiters
- Automatic Gain Control
- Gate/Downward Expander
- Ducker
- 2-Way Crossover
- Subwoofer Processor
- Splitter
- Delay Processors
- 2x2 Matrix Mixer

How DFR22 Processes a Stereo Main Mix.

DFR22 provides:
- Stereo 16-band digital feedback reducer
- Linked 30-band graphic equalizers
- Stereo compressor with soft knee
- Linked 10-band parametric equalizers with additional cut / shelf filters
- Stereo limiter
- Up to 2 seconds of delay per channel

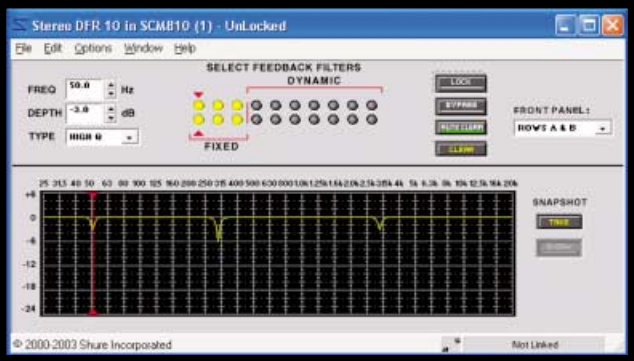
How DFR22 Functions



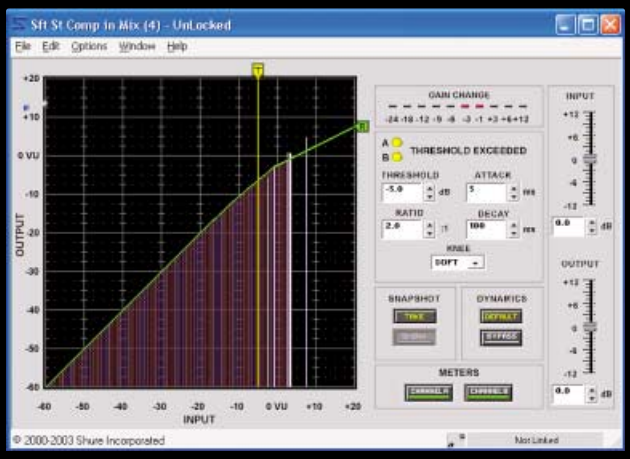
For subgroup insert, DFR22 provides:
- 16-band digital feedback reducer
- Automatic Gain Control
- Soft knee compressor
- 10-band parametric equalizer
- Limiter

Flexible. Customizable. Configurable.

Processing blocks in the DFR22 can be applied in any order, to any input or output. You can also link processors for more efficient global control. Copy and paste processing blocks to any input or output to duplicate processors across multiple channels.

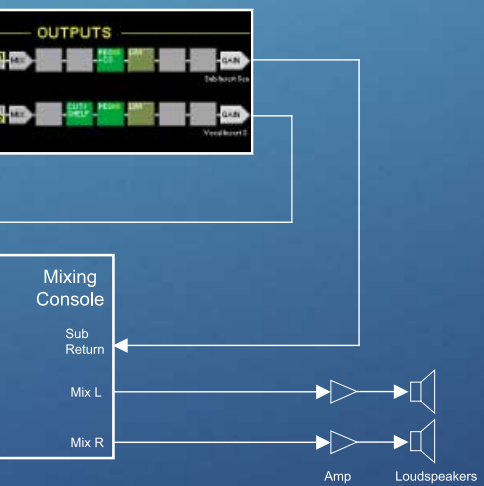


With the DFR22, you can design the entire system, save it to disk, and load it at the job site for easy setup. The DFR22 also allows real-time design changes, so you can add, subtract, or change processing blocks as you tune the system. It makes setup a breeze. And ensures that you get the best possible customized processor for your application. Frequency response and signal levels can be visually monitored in real time as parameters are adjusted.



Contact your dealer to experience Soundplex® Smart DSP from Shure.

as an Insert Processor.



For lead vocal channel insert, DFR22 provides:
- 16-band digital feedback reducer
- 30-band graphic equalizer
- Soft knee compressor
- Cut / shelf equalizer
- 10-band parametric equalizer
- Limiter

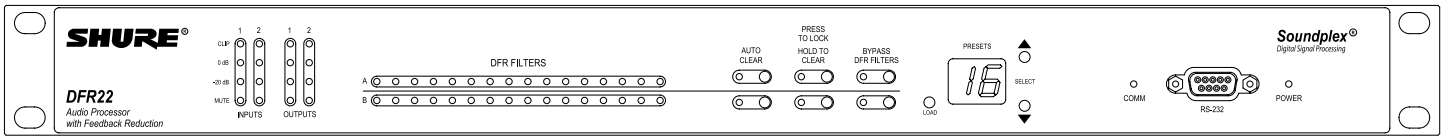
How DFR22 Functions as a Monitor Processor.

For PSM Monitors, DFR22 provides:
- 30-band graphic equalizer
- Soft knee compressor
- 10-band parametric equalizer with additional cut / shelf filters
- Peak stop limiter

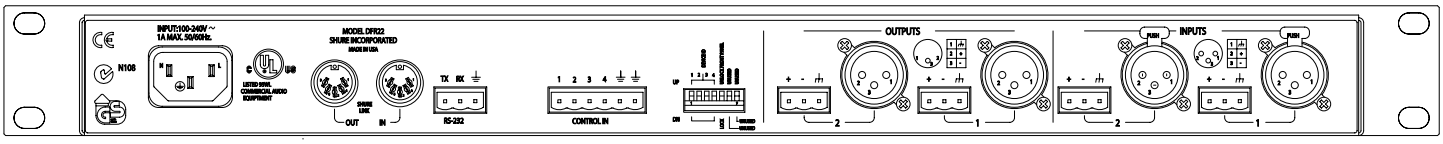
For floor wedge monitors, DFR22 provides:
- 16-band digital feedback reducer
- 30-band graphic equalizer
- Soft knee compressor
- 10-band parametric equalizer with additional cut / shelf filters
- Limiter

DFR22

FRONT



BACK



HARDWARE SPECIFICATIONS

Frequency Response
20 Hz to 20 kHz +/- 1 dB
Dynamic Range
110 dB minimum, A-weighted, 20 Hz to 20 kHz
Sampling Rate
48 kHz
Digital-to-Analog, Analog-to-Digital Conversion
24 bit
Impedance
Input: 10 kΩ
Output: 120 Ω
Input Clipping Level
+24 dBu minimum
Output Clipping Level
+24 dBu
+12 dBu (with 12 dB pad)
+6 dBu (with 18 dB pad)
Total Harmonic Distortion
< 0.05%, +4 dBu, 20 Hz to 20 kHz
Propagation Delay from Input to Output
<1.5 ms. Processing blocks add no latency.
Polarity
Input to output: non-inverting (inverting optional)

Operating Voltage
100-240 Vac, 50/60 Hz (auto-switching), 1 A maximum
Maximum Power Drain
45W
Temperature Range
Operating: -7º to 49º C (19º to 120º F)
Storage: -29º to 74º C (-20º to 165º F)
Dimensions
482.6 mm x 247.7mm x 44.4mm (19 in x 10 in x 1.75 in)
Weight
2.83 kg (6.25 lbs)
Furnished Accessories
Power Cable
5-pin DIN Shure Link Cable
Hardware Kit
5 Block Connector Terminals, 3-pin (for audio inputs and outputs, RS-232)
1 Block Connector Terminal, 6-pin (for control inputs)
4 Rackmount Screws and Washers

Optional Accessories
DRS-10 Wallplate unit with 10-position rotary switch for preset control

SOFTWARE SPECIFICATIONS

DFR

Automatic Feedback Reduction
5-, 10- and 16-filter single-channel and stereo modules
Frequency resolution: 0.1 Hz
Filter width: 1/10 to 1/70 octave
Filter depths: up to 18 dB

EQ & Shelving

Graphic Equalizers
10 and 30 band modules. Combining and Non-combining.
Up to 12dB boost, 18dB cut
Parametric Equalizers
Available in modules with 3, 5, 7, & 10 filters, plus cut/shelf filters
Bandwidth: 1/70 to 4 octaves
Up to 18 dB cut and boost per filter
Cut/Shelf Equalizer
High/Low shelf filters: 6, 12dB/octave slopes, 18dB boost/cut
High/Low cut filters: 6, 12, 18, 24 dB/octave slopes
Cut filter types: Butterworth, Bessel, and Linkwitz-Riley

Delay

Up to 2 seconds per delay block
10 seconds total of available delay memory
20 microsecond resolution

Crossovers and Splitter

Crossovers
2-way crossover and subwoofer modules
Independently adjustable slopes
Butterworth, Bessel, & Linkwitz-Riley up to 24 dB/octave
Adjustable polarity, muting and gain (+/-12 dB) per output

Splitter
2-way splitter

Dynamics Processing

Compressor/ Limiter
Versions Available: Soft/Hard Knee,
Stereo & Peak Stop (look ahead) Limiter
Attack: 1 ms to 200 ms, 0 ms for Peak Stop Limiter
Decay: 50 ms to 1000 ms
Ratio: 1:1 to Infinity:1
Gate and Downward Expander
Ratio 1:1 to Infinity:1
Attack: 1 to 200 ms
Decay: 50 ms to 1000 ms
Gate Hold Time: 0 to 500 ms
Automatic Gain Control
Ratio: 1:1 to 10:1
Attack: 200 ms to 3 seconds
Decay: 500 ms to 5 seconds
Maximum Boost: 12 dB
Ducker
Attack: 1 ms to 5 seconds
Hold: 1 ms to 10 seconds
Release: 1 ms to 10 seconds
Attenuation: 0 dB to – Infinity

Matrix Mixer

Route any input to any output
Independently adjustable crosspoint gain, muting and polarity

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